Chapter II: Newton & Classical Mechanics

Section 1: Executive Summary

Newton made the applied force calculation very clumsy and complicated. Any description of science would be as such that everybody understands the phenomena and can relate day to day activities. To calculate the value of applied force Newton introduced momentum, inertia, impulse, acceleration etc. Still we are unable to answer what the relation is between applied force & momentum, applied force & inertia, applied force & impulse. Still we are in an ignorance why do we use a ratio say acceleration and why do we not use another ratio say velocity (as velocity first then acceleration) to quantify the value of applied force.

What happens actually when you apply a force on an object? Applied force either moves an object or increases/decreases the velocity of an object. It might change the mass of the nucleus (as mass & energy can change each other) or might change the energy level of the electrons of outer shells. We can relate the increase or decrease of energy into the outer shells of electrons with acceleration or deceleration. If applied force transforms into energy and that increases the energy level, it creates acceleration and vice versa. If the transformation of the energy gets arrested into the object and if it doesn't change with time/distance, the object will move with uniform velocity. So, applied force acts as an operating force.

We can very well explain the phenomena by "cause & effect". If an object moves/accelerates due to an applied force then obviously the object will move so long the value of applied force act on it and an external force (say, friction) reduces (in some cases increases) the value of applied force. According to Newton, calculated value of applied force on an object, moving with uniform velocity, is zero. According to the principle of "cause & effect" it can't be happened, because uniform velocity couldn't be the primordial stage of an object as it was created by a so called big bang a big thrust.

According to Newton, acceleration occurs due to an applied force. Here a question arises, how come an object gets momentum? Somebody may answer "an impulse". Here another question arises, impulse isn't it an applied force? Somebody might argue, impulse creates a momentum and applied force creates acceleration. Here we get puzzled to define applied force which remains far from the natural phenomena. Here a natural phenomenon doesn't explain the principle of sciences rather a principle of science directs/explains the natural phenomena. That's why science, nowadays, has become so complicated.

According to Newton, inertia is an inbuilt quality of an object. Due to inertia, an object tries to preserve its own state. We are still in misconception and we don't know why inertia actually evolves/prevails. In my consideration, inertia evolves/prevails only when there is an arena of gravitational force. In a real vacuum where the values of all integers are zero, objects do not move anywhere, wherever in vacuum if you place an object that doesn't move. If you place an object/marble on a paper on the top of a glass and due to the sudden taking away of the paper, the object/marble does not fall into the glass in vacuum. Whereas if the experiment is conducted in a gravitational field, the object/marble falls into the glass.

In case of the inertia of motion, when you apply a sudden force on a static object or a sudden brake on a moving object, that shows an abnormal behavior due to the presence of gravitational field. Whereas if you do the same experiment in a true vacuum you find normal behavior. In a true vacuum, if one marble hits another marble (static), both the interacting marbles move conjunctly with same velocity in accordance with mechanics for new age. In this case, static object/marble will not hindrance the movement of the moving object or resist/oppose the hit/applied force on it.

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Section 11: Declarations by Mechanics for New Age

Declaration 1: Vacuum, Its Necessity and Characteristics.
Declaration 2: Definition of Applied force.
Declaration 3: Laws of Applied Force (Replacing Laws of Motion & Law of Gravitation Force).
:**Declaration 4**
Declaration 5: Applied force is an internal phenomenon of an object not external.
Total quantity of applied force, calculated for total units, will be equals to the summation of the quantity of applied forces in every individual unit while traveling by an object.
Declaration 6: Objects require same quantity applied force to travel a same distance.
Declaration 7: Elementary gravitational attraction force, dissimilarities with previous, characteristics and mechanism.
Declaration 8: Identifying & explaining other category of applied forces.
Declaration 9: Applied force is an operating force and no object moves without any operating force. Object moves in the way where the applied force/resultant force acts.
Declaration 10: Applied force is solely related with traveling distance not with the shortest distance.
Declaration 11: Value of applied force and the quantity of applied force have different meaning than that of applied force.
Declaration 12: Applied force itself is a work, so no terminology for work is required separately.
Declaration 13: Mass is no how related with the result of applied force. Tendency force evolves due to the gravitation force.
Declaration 14: Objects can't apply forces on its own. Weight of an object is unborn in this regard.
Declaration 15: In a vacuum resultant action and the resultant reaction (positive reaction on its own) would have same value and would follow the same direction.
Declaration 16: Opposite reaction evolves due to the presence of an elementary gravitation force. In a vacuum, no opposite reaction happens.
Declaration 17: Bigger the object earns a bigger the capacity to apply & restraints force in the presence of gravitation field.
Declaration 18: Inertia is not an inbuilt quality of an object rather it can be explained as an applied force/resultant force of an object and it evolves due to the gravitation field.

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Section III: Simulations

Simulations 1: Push is nothing but an applied force.
Simulation 2: Newton's laws of motion can't identify whether an object is in rest or in motion (uniform).
Simulation 3: Newton's laws of motion are incomplete without the sub laws & derivatives.
Simulation 4: Contradictory approach
Simulation 5: Object and its center
Simulation 6: Mass & weight
Simulation 7: Under the Apple Tree: (Earth applies the bigger the force on the bigger the object)
Simulation 8: Pulling Rope: (Both objects attract each other with the same applied force)
Simulation 9: Magic of the velocity
Simulation 10: There are ambiguities using Newton's laws, how long the action of an applied force remains on an object.

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Section IV: Shortcomings of old notion and the necessity of new

Contention 1: According to Newton's law, objects can move without an operating force, due to inertia.
Contention 2: Newton's laws of motion can't identify whether an object is in rest or in motion (uniform).
Contention 3: Newton's laws of motion are incomplete without the sub laws.
Newton's laws of motion can't predict how far an object travels without the help of other laws or derivatives.
Contention 4: Newton's laws of motion fail to describe all sorts of applied forces. It requires another law to describe universal gravitation force.
Contention 5: Initial velocity doesn't matter in calculation of applied force by Newton as value of acceleration is the only concern which remain same whatever it may be the value of velocity.
Contention 6: Newton's laws (laws of motion and the law for universal gravitation force) are self contradictory and also contradictory with the observations (by Galileo).
Contention 7: According to Newton's law of gravitation force, every object attract each other, whereas we do not see a pencil or any other object is attracting any other pencil like the way a pencil or any object is attracted by the earth.
Contention 8: Newton introduces acceleration for which static universe model is never possible to explain.
Contention 9: Falling objects fall due to their weight but weight can't be an operating force.
Contention 10: Newtonian laws can't segregate the value of applied force and the quantity of applied force.
Contention 11: Newton's rate calculating applied force is analog not digital.
Contention 12: Newton introduces inertia as an inbuilt quality of an object but he didn't relate inertia with the formula of applied force.

Contention 13: For the better performance Newton required to equalization both his laws. But we can show that this is unethical because Foxma is only applicable for a moving object and $FxmM/d^2$ is only applicable for the static objects.
Contention 14: Value of $FxmM/d^2$ doesn't change with the traveling distance of an object rather it remain fixed with the distance from a center.
Contention 15: According to Newton's law of gravitation force, both the interacting objects moves toward each other. According to new formula, only smaller object moves toward the bigger object.
Contention 16: There is a discrimination using Newtonian law as earth apply bigger the attraction force on bigger the object but other objects apply same force on bigger or smaller.
Contention 17: The effect of an applied force is acceleration.
Contention 18: In case of all falling bodies, value of acceleration remains static
Contention 19: In case of uniform velocity, value of acceleration is nil and thus the value of applied force.
Contention 18: In case of a falling body, the value of attraction force on it increases as $FxMm/d^2$.
Contention 20: Every action has its equal & opposite reaction.
Contention 21: Value of attraction force depends on both the mass of interacting objects.
Contention 22: Value of applied force on two interacting objects is same.
Contention 23: Due to inertia object tends to maintain its condition in rest or motion.
Contention 24: Resultant force will act toward diagonal when two forces
interact in the direction of two sides of a rectangle. Contention 25: Planets follow elliptical path while orbit round the Sun.
Contention 26: There are ambiguities using Newton's laws, how long the action of an applied force remains on object.
Contention 27: Negative values of applied force, mass, velocity are acceptable in the Newton's laws of motion.
Contention 28: According to Newton, circular orbit is not possible, elliptical orbit is possible
Contention 29: Newton's laws of motion can't segregate different types of forces. It can only describe one type of force.
Contention 30: Vacuum is a place where object can transform its acceleration into uniform velocity.
Contention 31: Rate of velocity change $(v-u)/t$ is confusing.
Contention 32: deceleration can't be explained by Newton's laws of motion.
Contention 33: Push is nothing but an applied force.
Contention 34: acceleration is nothing but an average velocity or uniform velocity.

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Section V: Some Elaborations of New Formula

Elaboration 1: Due to a tendency force every object tend to move toward it's center, every center toward another and the ultimate center remain static in its position. Bigger the object (interacting) shows bigger the tendency force.
Elaboration 2: Every center applies an elementary attraction force on all its objects. Attraction force by a center is of accelerative type. Bigger the object (center) applies bigger the elementary attraction force. When an interacting object (with elementary attraction force) is in static position (velocity is zero). value of an elementary attraction force is also zero.

Elaboration 3: One object may apply same/equal value of applied force on multiple objects at a time in a vacuum.
Elaboration 4: Elementary Gravitation Force: When an object and its center interact, elementary gravitation force creates.
Elaboration 5: A separating force act as a plane and it separates an object from its center.
Elaboration 6: Some Important Questions & Answers.
Elaboration 7: Falling objects & their categories.
Elaboration 8: Applied forces on falling objects in vacuum.
Elaboration 9: Applied forces on falling objects in air.
Elaboration 10: Applied forces on objects traveling on floor.
Elaboration 11: An attraction force applied by a center like Earth.
Elaboration 12: Inertia & applied force.
Elaboration 13: Uniform velocity & applied force.
Elaboration 14: Acceleration vs. applied force.
Elaboration 15: How applied force act between object and its center.
Elaboration 16: How applied force act between the Sun & planets.
Elaboration 17: Applied forces VS electrons & center.
Elaboration 18: Mass vs. Weight.
Elaboration 19: How planets balances with Sun.
Elaboration 20: Nuclear applied force.
Elaboration 21: Applied force vs. work in mechanics.
Elaboration 22: How Creation of Universe relates with various applied forces.

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Section VI: Beauty of the new declarations

Beauty 1: We may forecast how far (distance) an object moves due to an applied force.
Beauty 2: We may forecast the speed acquire an object due to an applied force.
Beauty 3: We may forecast the duration how long the action of an applied force remain on an object.
Beauty 4: Erase the prevailing ambiguities describing the phenomena of falling bodies.
Beauty 5: Erase the ambiguity whether an object is in rest or in motion.
Beauty 6: Deceleration is also a measure of an applied force. Newton's laws of motion fail to explain deceleration.
Beauty 7: Accredits, applied force is an operating force for a moving object and no object moves without any operating force.
Beauty 8: Doesn't accredit inertia. Inertia is described with the resultant applied force.
Beauty 9: Value & quantity of applied force doesn't depend on the mass of that object in a vacuum. So, two objects with different masses travel the same distance at the same time from the rest.
Beauty 10: An applied force creates the same velocity on all its objects.

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Section VII: Newton's Book Analysis